WHAT IS CLAIMED IS:

1. A system for controlling power distribution in an aircraft, comprising:

a first interface;

a plurality of nodes connected to the interface; each of said plurality of nodes monitoring and responding to commands received from the first interface;

a communication network interconnecting each of the plurality of nodes and the first interface; and

a second interface for receiving commands from an aircraft load management system.

2. The system of claim 1, further comprising:

a control device operably coupled to the first interface; said control device providing a flight crew with control over the system;

an in-flight control device having a touch screen; said device providing a passenger with control over multiple functions at each seat in the aircraft; and

a computer device operably coupled to the first interface; said computer device providing maintenance of the system by way of software which reside on the computer.

3. The system of claim 1, further comprising:

external closures and external switches or relays which perform system on/off functions when activated/deactivated by the flight crew.

4. The system of claim 3, wherein the external closures are programmed upon installation of the system.

5. The system of claim 2, further comprising:

passenger seat controls.

6. The system of claim 5, wherein the in-flight control device activates various seat motors, turns on/off at least one reading light, adjusts light intensity of the at lest one reading light, and turns on/off in-seat power ports.

7. The system of claim 5, wherein the passenger seat controls move various seat motors, turn on/off at least one reading light, adjust light intensity of the at least one reading light, turn on/off the in-flight entertainment system, and turn on/off in-seat power ports.

8. The system of claim 1, further comprising:

a gateway controller coupled to the first interface.

9. The system of claim 8, wherein the gateway controller is a removeable.

10. The system of claim 1, wherein the communication network is a inter-node and power communication network.

11. The system of claim 10, wherein the communication network is one of an Ethernet network, a CAN bus and a Twisted wire differential serial bus.

12. The system of claim 1, wherein the second interface is an ARINC 429 data bus.

13. The system of claim 1, wherein each of the plurality of nodes comprises:

a communication transceiver and packet processor operable coupled to the communication network; said communication transceiver performing at least one of address recognition, error detection and correction, and buffering;

an input voltage module supplying power to a respective node;

a control processor; said processor receiving commands from the communication network and broadcasting information to other nodes on the network;

an analog to digital (A/D) convertor and multiplexor; said A/D convertor and multiplexor monitoring inputs received by the multiplexer; and

a plurality of power supplies receiving and converting power from the input power module.

14. The system of claim 13, wherein the inputs received by the multiplexer are currents drawn by various motors in the aircraft, voltages and currents generated and drawn by power supplies in the aircraft, current being drawn by the input voltage power module, and any ground fault current drawn during a fault condition.

15. The system of claim 13, wherein the input voltage module operates at 115 VAC, 400 Hz.

16. The system of claim 13, wherein the plurality of power supplies comprise:

at least one DC-to-AC invertor;

at least one DC-to-DC power supply; and

at least one pulse width modulated control.

17. The system of claim 13, further comprising:

passenger controls and indicator; said controls and indicators permitting a passenger to control seat motors, activation and deactivation of the in-flight entertainment system.

18. The system of claim 13, further comprising:

solid state relays; and

seat motor controllers coupled to the relays.

19. The system of claim 18, wherein the seat motor controllers generate direction and start/stop information for seat motors seats in the aircraft.

20. The system of claim 19, wherein the seat motor controller is implemented by way of one of programmable or discrete logic, and at least one microprocessor and digital signal processor.

21. The system of claim 18, wherein outputs from the motor controllers control at least one of solid state and electro-mechanical relays and solid state "H bridge" devices.

22. The system of claim 20, wherein the solid state relays and "H bridges" are one of discrete electronic devices, or integrated solid state relays.